

WHAT IS CLAIMED IS:

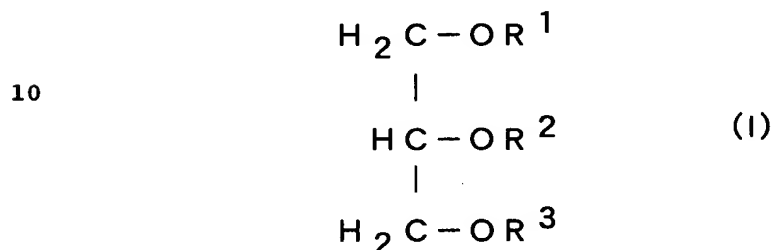
1. A wrap film comprising a thermoplastic resin composition and having an elongation at break in the longitudinal direction of less than 100% and a strength at 5% elongation in the longitudinal direction of 150 cN/10 mm or less.
- 5 2. The wrap film according to claim 1, wherein said thermoplastic resin composition mainly comprises a polypropylene resin, and said wrap film is a biaxially stretched film.
3. The wrap film according to claim 2, wherein said thermoplastic resin composition contains a resin having a flexural modulus of 100 MPa or less.
- 10 4. The wrap film according to claim 3, wherein said thermoplastic resin composition comprises a polypropylene resin and at least one of an ethylene-propylene rubber and an ethylene- α -olefin copolymer in which the α -olefin has 4 or more carbon atoms as said resin having a flexural modulus of 100 MPa or less.
- 15 5. The wrap film according to claim 3, which is a stretched multilayer film having an intermediate layer and a first and a second surface layer provided on each side of the intermediate layer, wherein said surface layers comprise a polypropylene resin, and said intermediate layer comprises a polypropylene resin and at least one of an ethylene-propylene rubber and an ethylene- α -olefin copolymer in which the α -olefin has 4 or more carbon atoms as said resin having a flexural modulus of 100 MPa or less.
- 20 6. The wrap film according to claim 1, which is a stretched multilayer film having an intermediate layer and a first and a second surface layer provided on each side of the intermediate layer, wherein said surface layers comprise a polypropylene resin, and said intermediate layer comprises an ethylene- α -olefin copolymer in which the α -olefin has 4 or more carbon atoms.

7. The wrap film according to claim 1, which is a stretched multilayer film having an intermediate layer and a first and a second surface layer provided on each side of the intermediate layer, wherein said surface layers comprise a polypropylene resin having a flexural modulus of 500 MPa or more, and said intermediate layer comprises a thermoplastic resin composition having a flexural modulus of 200 MPa or less and containing a polypropylene resin.
8. The wrap film according to claim 7, wherein said thermoplastic resin composition making said intermediate layer contains a resin having a flexural modulus of 100 MPa or less.
9. The wrap film according to claim 1, which is a stretched multilayer film having an intermediate layer and a first and a second surface layer provided on each side of the intermediate layer, wherein said surface layers comprise a polypropylene resin having a flexural modulus of 500 MPa or more, and said intermediate layer comprises a thermoplastic resin composition containing a polypropylene resin and a resin having a flexural modulus of 100 MPa or less.
10. The wrap film according to claim 1, wherein said thermoplastic resin composition contains a tackifier.
11. A wrap film which is a stretched film of a polypropylene resin composition comprising (A) a polypropylene resin, (B) a tackifier comprising a hydrocarbon having a number average molecular weight of 300 to 3000, (C) a nonionic surface active agent having an HLB value of 3.5 to 8, and (D) a nonionic surface active agent or fat and oil having a smaller HLB value than component (C).
12. The wrap film according to claim 11, wherein said polypropylene resin composition comprises 1 to 8 parts by weight of component (B), 0.1 to 2 parts by weight of component (C), and 0.1 to 3 parts by weight of component (D), per 100 parts by weight of component (A), and the proportions of component (C) and component (D) being 3 to 50 parts by weight and 10 to 70 parts by weight, respectively, per 100 parts

by weight of component (B).

13. The wrap film according to claim 11, wherein component (B) comprises polybutene, component (C) comprises a glycerol or polyglycerol fatty acid ester having at least one hydroxyl group per molecule, and component (D) comprises a glycerol or polyglycerol fat and oil having at least two acyl groups containing 8 to 18 carbon atoms per molecule.

14. The wrap film according to claim 11, wherein said polypropylene resin composition further comprises (E) a glycerol fatty acid ester represented by formula (I):



- wherein two out of R^1 , R^2 , and R^3 each represent an acyl group having 2 to 6 carbon atoms, with the rest representing an acyl group having 2 to 22 carbon atoms,

in an amount of 0.1 to 3 parts by weight per 100 parts by weight of component (A) and 10 to 70 parts by weight per 100 parts by weight of component (B).

15. The wrap film according to claim 11, wherein said polypropylene resin as component (A) has a propylene content of 88 to 99% by weight.

16. The wrap film according to claim 14, wherein component (C) is solid at room temperature, and component (E) is liquid at room temperature.

17. A biaxially stretched polypropylene multilayer film obtained by simultaneous biaxial stretching of a sheet having at least layer A, layer B and layer C in this order, wherein

said layer A is made of a resin composition comprising a polypropylene resin

and 1 to 15 parts by weight of at least one of polybutene and polyisobutylene per 100 parts by weight of the polypropylene resin,

said layer B is made of a resin composition comprising a polypropylene resin and 1 to 20 parts by weight of at least one of polybutene and polyisobutylene per 100 parts by weight of the polypropylene resin,

said layer C is made of a resin composition comprising a polypropylene resin and 1 to 15 parts by weight of polybutene per 100 parts by weight of the polypropylene resin,

said polypropylene resins used in said layers A, B and C independently have a melt flow rate of 0.5 to 15 g/10 min at 230°C,

the DSC peak melting temperature of said resin composition of said layer B exceeds those of said resin compositions of said layers A and C, and

the stretch ratios of said sheet in the machine direction and the transverse direction independently range from 3 to 7.

18. The biaxially stretched multilayer polypropylene film according to claim 17, which is obtained by simultaneously biaxially stretching a tubular sheet having the layers A, B and C in this order with the layer C inside and the layer A outside at stretch ratios in the machine direction and the transverse direction independently ranging from 3 to 7 and slitting the stretched film.

19. The biaxially stretched multilayer polypropylene film according to claim 17, wherein the weight ratio of said layer C to the total layers is 5 to 30%.

20. The biaxially stretched multilayer polypropylene film according to claim 17, wherein the DSC peak melting temperature of said resin composition making the layer B is higher than those of said resin composition making the layer A and said resin composition making the layer C by at least 1°C.

21. The biaxially stretched multilayer polypropylene film according to claim 17, wherein said polypropylene resins of the layer A and the layer C each comprise an ethylene-propylene copolymer or an ethylene-propylene-butene copolymer, and the

DSC peak melting temperatures of said resin compositions making the layer A and the layer C are 145°C or lower.

22. The biaxially stretched multilayer polypropylene film according to claim 17, wherein said polypropylene resin of the layer B comprises an ethylene-propylene
5 copolymer or an ethylene-propylene-butene copolymer, and the DSC peak melting temperature of said resin composition making the layer B is 150°C or lower.

23. The biaxially stretched multilayer polypropylene film according to claim 17, wherein said polypropylene resin of the layer B contains an amorphous polypropylene copolymer having a Shore D hardness of 55 or smaller.

10 24. The biaxially stretched multilayer polypropylene film according to claim 17, wherein at least one of said resin compositions making the layers A, B and C comprises residuals generated in the production of said multilayer film.

25. The biaxially stretched multilayer polypropylene film according to claim 17, wherein said simultaneous biaxial stretching is at an areal stretch ratio of 10 to 40.

15 26. The biaxially stretched multilayer polypropylene film according to claim 17, wherein the sheet before stretching or the stretched film is irradiated with electron radiation.

27. A biaxially stretched polyolefin multilayer film for wrapping which is obtained by simultaneous biaxial stretching of a sheet having at least layer A', layer B' and layer
20 C' in this order, wherein

said stretched film has an elongation at break of 120% or less in both the machine direction and the transverse direction as measured according to JIS Z1712, a tensile modulus of 150 to 450 MPa in both the machine direction and the transverse direction as measured according to JIS Z1712, and a thickness of 8 to 15 μm ,

25 said layers A' and C', which are surface layers, both have a polypropylene resin content of 60% by weight or more, and

said layer B', which is an intermediate layer, is made of a polyolefin resin or a polyolefin resin mixture.

28. The biaxially stretched multilayer polyolefin film for wrapping according to claim 27, which has a surface roughness Ra of 0.08 μm or smaller and a 10 point height
5 parameter Rz of 0.65 μm or smaller, both measured in accordance with JIS B0601.

29. The biaxially stretched multilayer polyolefin film for wrapping according to claim 27, wherein said layer B' comprises 30 to 100% by weight of a polyolefin elastomer resin having a flexural modulus of 100 MPa or less as measured in accordance with JIS K7171 (ISO178:1993).

10 30. The biaxially stretched multilayer polyolefin film for wrapping according to claim 27, wherein said layers A' and C' have a polypropylene resin content of 90% by weight or more.